

Science Skills-7

Metric Conversion 1

You can use multiplication to convert from one unit to another in the metric system.

Examples: 32 meters = _____ millimeters
 Since 1 meter equals 1000 millimeters, you multiply 32 by 1000.
 32 meters = 32,000 millimeters

114 millimeters = _____ meters
 Since 1 millimeter equals .001 meters, you multiply 114 by .001.
 114 millimeters = .114 meters

Another way to perform metric conversions is by simply moving the decimal point. When you go from larger units to smaller units, move the decimal point to the right. When you go from smaller units to larger units, move the decimal point to the left. If there is no decimal point showing, assume it is to the right of the last numeral. The chart below will help you do this.

kilo (k)	hecto (h)	deka (dk)	meter, liter, or gram (m, l, or g)	deci (d)	centi (c)	milli (m)
1000	100	10	1	.1	.01	.001

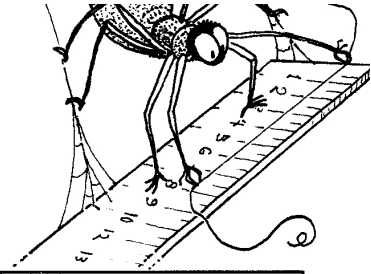
Examples: 52.3 kilograms = _____ grams
 To move from kilogram to gram on the chart, you move three places to the right, so the decimal point moves three places to the right.
 52.3 kilograms = 52,300 grams

8.2 centimeters = _____ meters
 To move from centimeter to meter on the chart, you move two places to the left, so the decimal point moves two places to the left.
 8.2 centimeters = .082 meters

Use the chart above to practice converting within the metric system.

1. 474 kg = _____ cg
8. 81.5 cm = _____ km
2. .2 cl = _____ ml
9. 988.52 mm = _____ hm
3. .001 km = _____ m
10. 23,500 mg = _____ g
4. .25 l = _____ dl
11. 2.6 kg = _____ mg
5. 6.789 cm = _____ hm
12. 5 m = _____ cm
6. 11.3 cg = _____ g
13. 9.09 hl = _____ cl
7. 25 l = _____ ml
14. 50 m = _____ km

The **meter** is the basic unit of length in the metric system. A meter is a little longer than a yard. In most foreign countries, long distances are measured in kilometers, and speed limits are posted in kilometers per hour (kph). Use the following chart as you answer the questions about metric length. Show your work in the space to the right of each problem.



kilometer (km)	hectometer (hm)	dekameter (dkm)	meter (m)	decimeter (dm)	centimeter (cm)	millimeter (mm)
1000 m	100 m	10 m	1 m	.1 m	.01 m	.001 m

- How many meters are in a kilometer? _____
- How many centimeters are in a meter? _____
- How many millimeters are in a centimeter? _____
- How many millimeters would you find on a meter stick? _____
- If a car is traveling at 40 kilometers per hour, how many kilometers would the car travel in 2 hours? _____ How many meters would the car travel in 2 hours? _____
- It is a 504-km trip from St. Louis, Missouri, to Kansas City, Missouri. How many meters are there between the two cities? _____ How many hectometers are there? _____
- Alicia needs 3 meters of fabric for a set of curtains she is making. How many centimeters of the fabric does she need? _____
- How many 5-kilometer races would a runner have to run in order to cover 50,000 meters? _____
- A certain kind of spider is about 8 millimeters wide. How many of these spiders would fit side-by-side on a meter stick? _____